COST *and* MANAGEMENT

THE OFFICIAL JOURNAL OF

THE CANADIAN SOCIETY OF
COST ACCOUNTANTS & INDUSTRIAL ENGINEERS

INCORPORATED 1920

HEADQUARTERS, 81 VICTORIA STREET, TORONTO

Telephone Elgin 8914

Vol. 6 AUGUST, 1931 No. 8

CONTENTS

Page

PUBLIC UTILITY ACCOUNTING CONTROL. E. H. Adams.... 226

TREND OF PRODUCTION COSTS..... 234

INDUSTRIAL EMPLOYEE RELATIONS. D. C. Patton..... 235

PRODUCTION OF A MODERN NEWSPAPER. J. S. Miller, A.C.I.S. 244

NEW BOOKS 252

STOCK CONTROL RECORDS. J. S. Luckett..... 253

CHAPTER NOTES 255

COST LITERATURE 256

Subscription price to non-members, $5 a year. Single copies 50 cents. Members desiring 5 copies or more of a single issue may obtain them at 25 cents each.

Public Utility Accounting Control

By E. H. ADAMS, Comptroller,
B. C. Electric Railway Co., Ltd., Vancouver.

(Before Vancouver Chapter, February 10, 1931.)

THE methods of accounting with which I have become most familiar during the last twenty-five years are those relating to public utilities—railway and bus transportation, electric power and light, gas, etc. As these are specialized businesses, I feel that I may not have much to say to you from which you can obtain any material benefit, but I am glad to have this opportunity to describe to you in a general way some of the methods which we employ in the financial side of our business.

In a business such as ours, having so many ramifications and embracing so many companies, the financial structure is apparently very complicated.

It may interest you to know that the predecessor companies of the B. C. Electric Railway Company embarked in the light and power business as long ago as 1887, and in the transportation business in 1889. Since that date a number of companies have been formed or acquired by us.

In all we have at the moment fifteen companies which have been formed or acquired since the B. C. Electric Railway Company commenced business in the Province thirty-four years ago, each company having some particular reason for its existence and each having a separate annual balance sheet.

I only mention that in passing to try and give you some idea of the large amount of work which has to be done in the preparation of annual reports and accounts.

I would like to deal tonight with only three phases of public Utility accounting control, because the time at our disposal will not permit us to go into the subject more deeply.

Budgetting Cash Requirements

I would first like to describe to you the system of budgetting our cash requirements.

In businesses such as ours, producing particularly hydro-electric power and gas, it is necessary to have a reasonably large margin of spare plant to take care of any extraordinary growth or development as well as breakdowns or emergencies. When you realize that it takes about three years, depending on conditions, to build a hydro plant, you will see that programmes of construction and plant extensions have to be projected long periods ahead of their actually being brought into use.

It is our practice each year to make a forecast for five years ahead, showing, first, the cash and securities on hand at the beginning of the period; second, the estimated net earnings, which means estimating the gross revenue from all departments (not an easy job in these times), and also estimating the working expenses, eventually

arriving at the balance of cash from earnings and reserves available for construction purposes. Thirdly, obtaining from the engineering staff and operating officials detailed estimates of their anticipated annual expenditures on plant extensions and improvements. After these have been thoroughly examined by the management, from the statement of cash and securities on hand and the estimated surplus earnings it is possible to calculate when new capital will have to be raised and in what amount.

That in a brief way describes the major budgetting system in use in our business. It is tremendously useful, in fact from the standpoint of the directors and the management it is indispensable, in that they get a condensed picture of what the probable expenditures and revenues of the business are likely to be.

You will, of course, appreciate that while our financial budget is projected for a period of five years ahead, any serious change in business conditions, which might make it necessary to speed up or slow down construction work, makes it necessary to revise the budget estimates.

Control of Expenditures

The next important matter for consideration is the method by which the expenditures in connection with our railway, light and power, and gas departments are assembled and controlled.

I propose to confine my remarks to the three major items of expenditure coming under the headings—operating expenses, maintenance or upkeep expenses, and capital or plant expenditures. In this connection we have a very comprehensive classification of accounts.

By actual count there are over 4,900 accounts used every month for the recording of expenses, coming under the three heads of operation, maintenance and construction. In addition, detailed labour, material and incidental costs are kept of work estimated to cost more than, say, $25.00, where such work is not purely of a routine or regular nature. Such work is usually covered by a specific work order issued by the department involved, and in the aggregate these work orders number about 600 to 650 per month. I will have more to say about work orders later.

Railway Department—For accounting purposes the railway department is divided into seven districts, each district, of course, having the same descriptive set of accounts. The reason for this is to enable us to see the financial results from the operations in each district. We follow pretty closely the American Electric Railway Association's classification of accounts as prescribed by the Interstate Commerce Commission. This classifies the operating and maintenance expenses under six main headings, namely—

Way and Structures,
Equipment,
Power,
Conducting transportation,
Traffic,
General and miscellaneous.

Light and Power Department—The light and power department is divided into six branches or districts for the same reason as the railway.

The operating and maintenance expenses of the light and power department are classified in accordance with the accounts presented by the National Electric Light Association, and such expenses are grouped under the main headings—

Transmission,
Substation expenses,
Distribution,
Utilization,
Commercial,
New business,
General expenses,
Merchandise.

Gas Department—The gas department accounts are classified on the same principle as those of the light and power department. Thus we have the main groups—

Production,
Transmission and distribution,
Commercial,
New business,
General and miscellaneous,
Stores and residuals,
Merchandise.

All the foregoing main groups are further divided up into primary accounts, which in turn are each broken down into as many subsidiary accounts as required. For instance, taking the rolling stock equipment group of accounts as an example, we have under this heading nine primary accounts. These nine primary accounts are again divided into twenty-eight subsidiary accounts. To explain further, I might refer specifically to the Primary Equipment Account No. 32, for repairs to passenger and combination cars.

This account comprises ten subsidiary accounts, which I will read off to you.

Account No. 32.01—Bodies, fixtures, attachments and wiring.
32.02—Painting and varnishing.
32.03—Wheels and axles.
32.04—Trucks and Journal Boxes.
32.05—Brake-rigging and hand-brakes.
32.06—Air-brake equipment, compressor motor and wiring for same.
32.07—Brake shoes. (Material only).
32.08—Fenders, wheel-guards and pilots.
32.09—Platform doors and gates and operating mechanism.

The repair and maintenance charges are summarized under these headings.

So you will gather that by following this practice with all our primary accounts we are to keep a close check on every phase of expenditure, besides being in a position to render comprehensive expense statements each month to each of the operating departments interested.

Assembling the Charges

I have gone into the various classes of accounts somewhat fully in order that you will be able to picture adequately the diversified nature of the company's operations and the necessity of maintaining such a large number of active accounts, which, as I told you before, is in the neighbourhood of 4,900.

Now the question is—how can we quickly and accurately assemble from time-slips, stores requisitions, invoices and so on, the charges which arise in connection with the accounts I have referred to.

The problem which has been facing us for some time, and which is the bugbear of nearly all accountants, is—how to assemble our monthly costs, classify them and render our monthly statements at an even earlier date than we do now? Two years ago the results of a month's operations were not known until about the 22nd of the month following. Now, despite increased volume, we have the figures ready by the 13th or 14th, and we expect to be able to do better than that.

For some time past we have been making extensive experiments with tabulating machines.

The punched card tabulating system has two principal functions. One is to sort into any order or classification desired. The other to prepare listings either in detail or in summarized totals. This sorting and listing is done by means of cards punched in such a manner as I will describe.

Three Types of Equipment

Three distinct types of equipment are necessary—1. The card-punching machine; 2. The sorter; 3. The tabulator.

Now, if you will examine the cards which have been handed round, you will see that each is covered with the figures from 0 to 9 arranged in vertical columns, of which there are 45 altogether. This particular card has been so designed as to serve a quadruple purpose.

1. To compile the payroll from information based on time-slips.
2. To distribute such labor to the appropriate accounts to be charged.
3. To record material issues from the stores by stock numbers and quantities.
4. To distribute such material issues to the appropriate accounts to be charged.

The card which is in your hands has been punched for payroll purposes direct from the man's time-slip. The time-slip of this man, whom we will call John Jones or Man No. 132, shows the following information, certain necessary particulars having been supplied in the payroll department before being handed to the tabulating department.

The month,
The day of the month,
The year,
The punch operator's number,
Whether straight time or overtime,

The department for which he works,
The number assigned to the man,
The number of hours and minutes worked,
The rate at which the man is paid,
The gross amount earned by the man,
Deduction for workmen's compensation,
Net amount payable to the man.

To those of you who are not familiar with the system, all this must sound rather formidable, but the actual operation takes very much less time than the description.

An average operator can punch 450 cards an hour.

The sorter will handle upwards of 300 a minute.

The tabulator will list at the rate of 55 cards per minute.

You will perhaps be wondering how we maintain control and produce final figures for the payroll department. In the first place, I will ask you to visualize a foreman in the mechanical department at one of our shops having sent in to the payroll department the day's time slip for, say, 75 of his men. Here some necessary checking is done. Gross earnings are computed on each slip on the basis of the man's rate and number of hours worked. An adding machine list is then taken of the extensions and hours. The resulting totals are then entered on a control sheet and also on the back of the bundle which for reference purposes receives a number.

The bundle of time-slips is then routed to the tabulating department and each slip is dealt with in the manner I have described. As soon as cards have been punched, these are run through the tabulating machine and the totals reconciled with the totals recorded on the back of the bundle. The cards are then filed in a drawer labelled with the name of the operating department to which they relate, in this case the mechanical department.

This procedure is repeated from day to day, so that at the end of two weeks we have twelve days accumulation of cards filed away for this department. Now we know by our control sheet the exact dollar value of those cards, so that if we place them in the sorter to be put in man order and then through the tabulating machine, we can then on a previously prepared payroll sheet (prepared by the Addressograph in man order) list the gross earnings, deductions, amount to be paid, etc., of each man. The resulting grand total must, of course, agree with the predetermined total as shown by our control sheet, and our payroll is completed.

The time-slips are returned to the payroll department daily, which after some further checking re-routes them to the accounts distribution department. Here the time-slips are carefully scrutinized and, if in order, the appropriate account numbers to be charged are entered in red ink thereon, and the necessary extensions made by comptometer operators. The total and number of the bundle is entered on a control sheet and then routed to the tabulating department, where cards are punched to correspond to the distributions given. It is only a case then of sorting into account classification order and listing the charges to be made against each account.

I should here impress on you that the tabulating machine system can probably only be justified where there is a large volume of work to be handled.

You will have some idea of the work we have to handle when I tell you we punch, sort and list approximately 180,000 of those cards per month.

Construction Accounts

On top of all the accounts I have mentioned, there is another set which I might refer to as construction or plant capital accounts. You will readily appreciate that such large projects as the Ruskin plant and the Bridge River enterprise require a large classification of accounts in order that the engineering department can be kept fully informed of construction costs. Some 300 accounts were necessary to take care of this feature.

Time does not permit me to go into much more detail with respect to our costing system. I would like to tell you about our motor vehicle costing records, however.

We have a large fleet of motor-driven vehicles—buses, trucks, cars, cycles, etc. There are at present 216 such vehicles in operation, comprising—

142 automobiles and trucks
26 passenger buses
22 freight trucks
13 trailers
5 tractors
8 motorcycles.

They are all numbered for identification and record purposes, and a separate account is kept for each car, to which is charged all repairs and maintenance expenses, gasoline, licenses, insurance, etc. For certain of our vehicles, such as our buses and coaches, a special costing sheet is maintained. This is ruled along the same lines as a cash book, in which each posting is classified at the time the entry is made therein. On the left of the form are the usual columns indicating the source and total amount of the entry. To the right we have columnar rulings to correspond to the titles of the operating expense accounts of our bus and truck lines.

These columns are for such items of expense as—

Maintenance of bodies,
" electrical system,
" chassis,
Monthly provision for annual overhaul, tire renewals,
Alterations to vehicles,
Accident repairs,
Vehicle licenses,
Gasoline—gallonage and value,
Oils—quantity, make and value,
Proportion garage and shop expenses.

All such items of expense as I have mentioned are strictly chargeable to the vehicle. At the end of the month it is only necessary to make a summary of the various columns of all the sheets and post direct to the relative operating expense accounts of the bus or

truck line affected. Running statistics are kept each month of each vehicle showing the mileage run, cost per mile of maintenance and miles per gallon of fuel consumed. In this way a close check can be kept on the operating costs of our various vehicles.

Work Orders

I said something before about work orders. I think that the most useful costing records we maintain are those which result from the issuance of work orders covering work of a special nature. As previously explained, except for ordinary day to day manitenance jobs or those of a most trivial nature, a work order is generally issued. Some 600 or 650 are issued every month. The work order sets out the nature of the work to be done, together with an estimate of the probable cost; labor and material. If the estimate exceeds $100, special authorization must be obtained from the management before the work can be proceeded with. This takes the form of an appropriation, made out on a form foolscap size, upon which all possible detailed information and cost estimates must be given. Sometimes the nature of the work to be done will require the assistance of two or more departments, in which case separate work orders are addressed to departments affected.

The work order numbers are quoted on all time-slips, stores requisitions, invoices, etc., and it is the duty of the accounting department to keep a costing record of the expenditure as incurred, classifying this as they go along. This is done on suitable ruled cards. At the top of each card is recorded the working of the relative work order and the amount of the estimate. Space is also provided to indicate the correct distribution of the month's expenditure. When notification is received of the completion of a work order, the accumulated totals on the costing cards are compared with the original estimate, and if there is a discrepancy of more than 10 per cent., or any other features which do not appear in order, the matter is taken up in the departmental correspondence and explanations asked for.

I would now like to present to you the third phase of our subject and tell you something about our methods of billing and keeping control of our light and gas customers' accounts.

For many years the system most generally used by light and gas companies in keeping customers' account records was that known as the Boston ledger system. This system had many good qualities, but did not lend itself in any way to machine billing. It was generally superseded by the loose-leaf individual account ledger record drawn up to suit the individual taste or requirements of each company.

Baltimore System

During the war, owing to the shortage of proper help, a radical change took place, originating in Baltimore and becoming known as the Baltimore System or Stub Plan of consumers' accounting.

It had been found that the light and gas business was practically a cash business, for the reason that about 75 per cent. of the customers receiving light and gas bills monthly paid their accounts

within the time allowed for payment, and that an expensive accounting system was being maintained for the 25 per cent. who had overlooked paying their bills, but who it might be assumed would eventually pay them. For these reasons the keeping of individual ledger sheets was abolished, and in place of the ledger page practically a duplicate of the account sent to the customer was retained in the office. As the cutomers paid their bills, the paid accounts were taken off the office file, leaving the unpaid accounts as the record of arrears owing by consumers.

This system is still being used by many smaller concerns, but in the bigger companies it has generally been discarded owing to there being several drawbacks. We were one of the first companies in the west to adopt the Baltimore system of billing, but after about two years use we became dissatisfied with the system and commenced experimenting with a system of our own.

We had up to this time been employing Burroughs' bookkeeping machines for the purpose of making out our accounts, and we desired to retain these machines owing to their speed and the fact that our operators had become used to them, but in the new scheme which we had in mind (being what we called a one-line bill, which I will describe to you later), the Burroughs Company had some difficulty in developing a machine adapted to one-line billing.

We put the proposition up to the Burroughs Company and they sent an expert from their Detroit factory, and after working with us for some three months he was able to rearrange the Burroughs machines to do the work in the manner in which we wanted it done.

That was in the year 1920, and the system then developed has generally become known as the register plan and has since been adopted by dozens of companies throughout the country.

So that you may understand just how this works, I will describe the various steps which have to be taken in making up the consumers' bill, or in other words establishing the debit against the customer.

Our consumers' accounts are all arranged in geographical or street and house-number order, so that the street address is the reference to the customer's account. The consumers' records are split up into groups with about 250 accounts in each group. Each group of 250 accounts has a control account which is a subsidiary part of the general ledger Consumers Account, being the account in which the total of accounts receivable due by consumers is shown.

The first step in the preparation of the bill is to have the bill addressed through the addressing machine, which is done at the rate of 7,000 impressions, or 3,500 bills per hour. The bill is at the same time numbered automatically by the addressing machine. The register sheet, on which there are about forty accounts to a page, has the consumers' name and account number impressed on the right-hand side.

The blank bills and blank register sheets are then turned over to the machine operators for the purpose of inserting the billing information, in the following manner.

The register sheet is placed in the machine. Immediately in front of this sheet is a carbonized roll which feeds in automatically with the register sheet. In front of the carbon is a slot provided in the machine for dropping in the bill form. The Burroughs operator sets up on the keyboard of the machine the previous reading, then the present reading, following with the K.W.H. consumption and the amount due for electricity. The machine automatically returns to the original position, when the previous gas reading is set up on the keyboard, followed by the present gas reading. The machine then automatically spaces over to the gas section of the register sheet, when the cubic feet consumption and gas charge are placed on the keyboard of the machine, followed by the meter rent and sundry charges and arrears, if any. This completes the work of the machine operator. The machine automatically totals the bill and enters the total on the stub or right-hand portion of the bill form, spaces up automatically and returns to position to receive the next bill for extension. From 900 to 1,375 bills per day of seven hours is the production obtained from each operator.

During the exension of these bills, the machine is accumulating a separate total of the K.W.H. consumption, electricity revenue, cubic feet consumption, gas revenue, meter rental, sundry charges, and total column vertically.

Before the bills are sent out to the customers they are checked back to the meter-book by a staff of checkers, and, all the charges having been as far as possible correctly established, the total of the register sheet for the section or ledger is carried into the debit side of the ledger control.

THE TREND OF PRODUCTION COSTS

THE Dominion Bureau of Statistics index number of commodity prices, with 1926 as the base period, declined from 73.0 in May to 72.2 in June. The main groups compare as follows:

	June 1930	May 1931	June 1931
Foods, beverages and tobacco	94.2	72.1	70.1
Other consumers' goods	86.4	79.7	80.2
All consumers' goods	89.5	76.7	76.2
Producers' equipment	91.4	90.1	89.1
Building and construction materials	92.2	83.4	83.3
Manufacturers' materials	82.5	62.4	62.0
All producers' materials	84.3	66.2	65.9
All producers' goods	85.0	68.6	68.2
All commodities	87.7	73.0	72.2

The most important reductions in June were in the following: Fresh domestic fruits, vegetables, meats and poultry, fats, brass, copper, solder. The most important advances were in the following: Fresh foreign fruits, dried fruits, silk fabrics, cement.

Industrial Employee Relations

By D. C. PATTON,
Sangamo Electric Co. of Canada, Ltd., Toronto.

(Before Hamilton Chapter, January 28, 1931.)

WHEN your Chapter honored me with an invitation to address you on some subject connected with cost accounting or industrial engineering, and submitted a number of suggested topics, I chose the subject "Industrial Relations, the handling of personnel, welfare work, etc.," to discuss. Let me make very clear first of all that I did not choose this general subject because I had any claim to be an authority or because it was one in which I have had any great experience; rather because it is a problem, or group of problems, in which I am very keenly interested and with which my Company has been grappling for some years with a fair measure of success and result.

First, may I state generally that like all of you, we realize that all employers of labor commit themselves to certain responsibilities to each individual they hire. A number of these responsibilities are fully covered by law, payment of wages, hours, sanitary working conditions, safety, and fire appliances, and so on, and the various federal, provincial, and municipal authorities pretty well take care of the carrying out of these obligations.

The employer of labor also undertakes moral responsibilities to his employees, and the degree to which these are lived up to varies in almost direct ratio to the integrity, unselfishness and efficiency in the character of the employer and the executive organization he has built up.

Objects of Welfare Plans

We hear of, or see, a good many cases where policies are adopted and carried out in respect to employee relations, welfare, profit sharing, etc., which are entirely voluntary on the employer's part, and quite outside legal or even moral responsibilities previously mentioned. Some of these plans have been purely of a benevolent or philanthropic nature and some at least have been proven successful from the sponsor's viewpoint as well as from the employee's.

Other policies have been adopted in a frank endeavor to cut down labor turnover. Most of you are familiar with welfare plans tried out during the hectic days of 1919, 20 and 21 when factories were straining every effort to keep up with deliveries, labor was at a premium, and labor turnover a costly and serious factor. I venture to state that few of those schemes, certainly not their frills, are in effect to-day. I do not believe that any general plan could be offered as applying to all industries, or to the varying conditions in those industries; obviously a welfare plan and employee relation policy adaptable to the employees of, say, a paper mill or packing house would be of little value in a plant where the average of skill, education and personality demanded of employees was on a much higher scale. The same broad general principles would, however, apply.

We believe in the very great importance in business of the human element; in the policy of absolute fair dealing with our employees; in the principle that what is good for the employee is good for us; and that carefully selected employees working for fair wages under conditions as healthful and pleasant as we can make them, produce more and better work. We do not make rules unless we are convinced that they are fair and necessary, but we do insist on these rules being obeyed. May I therefore, outline what we have done and are doing, in the Sangamo Company, with the hope that some features may be of interest to you:

Check-up of Methods

Due to rapidly changing conditions and expansion in our plant, we were faced a few years ago with the necessity of rather the same intensive "housecleaning" which Mr. Doering so interestingly described in his talk to us in Toronto last October. We had to take stock of ourselves and our personnel, our methods of employing help, and dealing with those we employed. We found some unsatisfactory conditions and set about correcting them. One fact stood out. We had grown lax in selecting help, and knew very little about a large percentage of our newer employees. We had allowed friends and relatives of old employees and even foremen to be taken on the payroll with the consequent cliques and talk of favouritism. We found we had been too easy going and paternal in our dealings with our people and that advantage was being taken of this. At any rate, for a number of reasons we decided to change our general attitude and to imbue our shop executive and foremen with a policy of impartiality and fairness, but also one of strictness in the insistence of established rules being carried out. In other words, to be a little more "benevolently hard boiled," and to make Sangamo a mighty good firm to work for, but also one where mighty good work was essential. As regards our selecting of new labor, a suitable man was given the duties of employment clerk. Applicants for work are directed to this office which is directly under the control of our factory superintendent. Application form was designed and applicants are given one to fill out. A number of pertinent but carefully designed questions are asked. I will read them to you if you will permit . . . . The applicant is requested to leave his completed form and await further notification, after being interviewed by a foreman or head of department under whom the applicant would work if accepted. A form letter is promptly sent to firms where applicant states he or she was previously employed, asking the following information . . . . The replies are attached to the original application and are reviewed, together with the foreman's comments, by the superintendent. His o.k., or in cases of new executives or senior positions the general manager's o.k., is then necessary before any new employee can be taken on the payroll or his application placed on approved waiting list.

Everyone Makes Application

When this plan was adopted every employee from the president down filled out one of the application forms. A similar sheet, but with additional space provided on the reverse for details as to date employed, wage rate, increases, insurance record, etc., was typed from this and became a permanent record. From the information thus

gained, together with an individual check up on each employee, some were let go, some transferred to other departments, and several have been promoted and taken on the staff. Some of our ablest young executives and clerks have been thus recruited from former factory workers. So much for that. We do now know whom we have on our payroll, are much more careful in our selection of new help, and the standard of character, efficiency, and general suitability among our people has greatly improved.

When an employee leaves of his or her own accord, or is discharged, a form is filled out by the employee's foreman or the department head which is used for several purposes. First, it is a notification to the payroll department that the employee is leaving and that their wages are to be made up. Second, it calls for a clear statement by the employee's foreman as to the reason for leaving. Third, it forms an acknowledgment for wages due, a follow-up for insurance cancellation, but most important, it gives the employee the opportunity of stating his case if for any reason he feels he is being unfairly dealt with, or that the foreman has not stated, in his opinion, the correct reason for leaving. This form also must have the factory superintendent's or general manager's o.k. before the employee leaves, and forms a permanent record.

We have pretty much the same rules covering attendance, punctuality, etc., as most firms and I won't take your time in speaking of them, except to mention that we have within the last year put into effect a plan which has tremendously reduced the number of lates among otherwise perfectly satisfactory employees. Two minutes leeway is granted, but immediately after all clock cards still in the unpunched rack are removed and a "late excuse" slip substituted. The clock cards are taken to the factory superintendent's office and late employees must present their written excuse before being given their card to punch in and commence work. The week before this went into effect we had about 50 lates among some 160 factory workers. The first week the plan was effective, there were only eleven late, and this average has held, or been improved. Lateness on the part of office employees is recorded and left with the various department heads to deal with. With an increasingly larger staff I am very much interested in a definite plan of penalties for chronic tardiness, and perhaps reward in the way of extra days vacation for good attendance records, considering both time lost through illness, etc., and punctuality. Would be glad of your views and experiences in connection with this problem. With our taking over of the Lincoln Meter Company, our office force is at present putting in a lot of overtime work, for which unlike factory worker, they receive no extra pay. One doesn't feel justified in taking an employee to task for being a few minutes late in the morning when one knows the same employee cheerfully worked till half past ten the night before.

Benefits to Workers

So far I have dealt mostly with the "don'ts" and rules and regulations. Now for a more pleasant side of the picture.

Particular stress is laid on cleanliness throughout the plant. We insist on machines and other equipment being left clean and tidy at the close of each day. An efficient staff of cleaners and sweepers is

kept busy, and are provided with modern equipment in the way of vacuum appliances, scrubbing machines, etc. A good deal of friendly rivalry exists among department foremen in the spic and span manner their departments are left at closing time. Laboratories and wash rooms are large, airy and kept really clean.

We pay our factory help each Friday, for the week ending the previous Saturday. Our present method of pay is, I believe, rather uncommon, and is the result largely of our desire to avoid a repetition of the pay roll hold up we suffered last year, and our bankers' co-operation. Tuesday afternoon each worker is handed a ticket which states that his pay for the previous week is so much, and if this is not in agreement with the amount the employee believes due, to report to the office before 2 p.m. Wednesday for adjustment or explanation. Then the card, signed by the employee, is exchangeable at a nearby branch of our bank on Friday noon, for his envelope in cash. Special tellers are furnished and arrangements made whereby an employee may have any stated amount deducted from his envelope and credited to his savings account. Pass books showing such credits are ready when the envelope is collected. The plan works very smoothly, and a large percentage of our people have built up quite remarkable savings balances.

Wage System

As to our basis of factory pay. As many operations as possible are on piece work rates. These rates are arrived at after careful time studies and a classification of all operations. When these rates are set, they are guaranteed against reduction unless the process, or design is changed. Our time study man, by the way, was selected from one of our keen younger machine hands, and is rapidly developing into an efficient and valuable member of our staff. After a month's intensive training in our parent plant, he was put into action here and in a little over 9 months' work has effected annual savings to the company, calculated on normal production, of some $6,700.00. The nice part about that is that the operators are making more money than under the old rates.

We carry group life insurance on all employees, commencing with a policy for $500 after six months' service, and increasing $100 yearly until a maximum of $1,000 is reached. The premiums are carried entirely by the company, but lately we have grown rather doubtful as to the advantage, if any, of this plan and are seriously considering changing it for one in which the employee would share the cost of similar or better insurance, or, preferably, a retirement pension plan. This opens a wide field for discussion and time forbids more than a mere mention of it here. It is increasingly apparent, however, that employees grown old in your service are a real problem and a real responsibility, and one which demands some definite policy. We are investigating the possibilities, and so far have had one attractive looking plan submitted by one of our leading Canadian insurance companies which has the very great attraction of getting away from the old bug-bear "Accrued Liability."

We have an arrangement with another insurance company whereby our people at very low group rates are insured against sickness and non-occupational accident. This is in two classes, the day workers who

pay full premiums, and salaried staff, who pay 2/3. The salaried people are guaranteed full salary for four weeks, and then 2/3 salary for a further nine weeks maximum.

A first aid room of which we are rather proud has recently been completed, fully equipped in every way for its purpose, and in charge of a capable trained attendant, chosen from our senior factory girls. While designed primarily for first aid, and open any time for emergencies and accidents, certain hours are set aside for consultation and minor treatments for any of our employees. We also have an arrangement with a doctor who visits the plant each Thursday for free consultation, and for medical examination, which has been made one of our rules of employment. In cases of illness, or accident outside the scope of Workmen's Compensation, our employees may, through the office, call the company doctor to their homes without charge. We have noted a number of cases where this plan has been of definite value, and many where employees have kept on the job when otherwise there would have been lost time and lost production. We feel it is one of the most valuable schemes we have in effect.

Social Club

A self-governed and self-supporting social club has been actively in existence among Sangamo employees for a number of years. Officers and committees are regularly elected annually, and the club organizes and puts on a splendid picnic each summer, one or two dances each winter, a Christmas tree for the kiddies, etc. Athletic activities, such as a softball league in the summer and a bowling league in the winter are also enthusiastically carried on. The club has charge of the employees' lunch and recreation room, which is a very popular place at noon hour.

The plant shuts down for two weeks each summer for machine overhaul, painting and general clean up. All vacations possible are scheduled for these two weeks so that full time production can be resumed immediately on re-opening. We have not yet a definite plan such as Mr. Doering outlined for holidays with pay for factory workers, but have in mind some such plan whereby stated number of days' vacation would be given employees with so many years service, with bonus of additional days for regular attendance during the year, and penalties for lost time.

For a number of years we have had weekly foremen's meetings where the trials and tribulations of the production departments are thoroughly thrashed out and decisions arrived at. Also weekly, and after the foremen's meeting, an executive meeting is held, where questions of general policy and so on are discussed and decided on as well as major items brought up at the foremen's meeting.

In conclusion, while it is impossible to put a dollar and cent value from the Company's standpoint on all these things, we do know that our labor turnover has been very low, that we have now a large percentage of loyal, enthusiastic employees, and that we are building up an esprit de corps in our whole organization, which is, of course, invaluable.

EMPLOYMENT APPLICATION BLANK SANGAMO ELECTRIC COMPANY OF CANADA, LIMITED	Date of Application ..... Class of Work ..... Approved .....

Name .....
Address .....
Where Born .....Date of Birth.....
If Naturalized Canadian, Check Here ☐
Married or Single .....
Children (State Number and Age) .....
Is Your General Health Good? .....
Have You Ever Had a Serious Illness? .....
State Nature of Illness ..... When.....
Have You Defective Eyesight? .....
Are You Prepared to Submit to Physical Examination by a Qualified Physician if Requested? .....
Do You Carry Life Insurance? .....
War Service, if any .....
Religion .....(Information Required by Law)
Have You a Savings Bank Account? .....What Bank? .....
Do You Own Your Own Home? .....
If You Are a Minor or Unmarried Do You Live With Your Parents? .....
Education (Give Full Details of Schools Attended, Courses Taken, Whether Matriculated, etc.) .....
.....
.....
Who Was Your Last Employer? .....
How Long Were You in Your Last Position? .....
Why Did You Leave? .....
State Briefly Details of Employment and Experience for Last Ten Years, Giving Names of Firms, Approximate Dates, etc. .....
.....
.....
Are You Looking for Permanent Employment? .....
If Applying for any Particular Class of Employment State Why You Think You are Qualified for This Work .....
.....
.....
Can You Operate a Typewriter? .....
Is There Any Type of Machine or Class of Work in Which Your Experience Has Made You Expert? .....
Can You Read a Blueprint? .....

Are You Related by Birth or Marriage to Any Employee of This Company? .....

If So, To Whom and State Relationship .....

.....

Do You Know What This Company Manufactures? .....

Important—Read This: In event of your Application for Employment being favorably considered, please bear in mind that the discovery of any false statement in connection with this application will be considered as sufficient cause for immediate discharge without notice.

Foreman's Comments .....

.....

.....

EMPLOYMENT RECORD SANGAMO ELECTRIC COMPANY OF CANADA, LIMITED	Dept. ..... Class of Work ..... Approved .....

Name .....

Address .....Tel. No.....

Where Born .....Date.....

If Naturalized Canadian, Check Here ☐

Married or Single .....

Children (State Number and Age) .....

Is Your General Health Good? .....

Have You Ever Had a Serious Illness? .....

State Nature .....When.....

Have You Defective Eyesight? .....

Are You Prepared to Submit to Physical Examination by a Qualified Physician if Requested? .....

Do You Carry Life Insurance? .....

War Service, if any .....

Religion .....(Information Required by Law)

Have You a Savings Bank Account? .....What Bank? .....

Do You Own Your Own Home? .....

If You Are a Minor or Unmarried Do You Live With Your Parents?

.....

Education (Give Full Details of Schools Attended, Courses Taken, Whether Matriculated, etc.) .....

.....

.....

Who Was Your Last Employer? .....

How Long Were You in Your Last Position? .....

Why Did You Leave? .....

COST AND MANAGEMENT

State Briefly Details of Employment and Experience for Last Ten Years, Giving Names of Firms, Approximate Dates, etc. .....

.....

.....

Are You Looking for Permanent Employment? .....

If Applying for Any Particular Class of Employment State Why You Think You Are Qualified for This Work .....

.....

.....

Can You Operate a Typewriter? .....

Is There Any Type of Machine or Class of Work in Which Your Experience Has Made You Expert? .....

.....

Can You Read a Blueprint? .....

Are You Related by Birth or Marriage to Any Employee of this Company? .....

If So, To Whom and State Relationship .....

.....

Do You Know What This Company Manufactures? .....

Foreman's Comments .....

.....

.....

INSURANCE RECORD

Insurance Applied For .....

Cert. No. ..... Received.....

Beneficiary .....

Relationship .....

Increases (Give Amount, Date Received and No.)

..... | .....

..... | .....

Advised Springfield to Cancel .....

Advice of Cancellation Rec'd .....

EMPLOYMENT AND WAGES RECORD

Date Taken on Pay Roll .....

.....At.....Per Hour or.....Per Week

O.K. Factory Supt. ..... Gen'l Mgr. .....

Increases (Give Date and Authority)

..... | .....

..... | .....

..... | .....

Date Left .....

Reason .....

.....

SANGAMO ELECTRIC COMPANY
of Canada, Limited
TORONTO, 2, CANADA
179-185 George St.

We have received an application for employment from.....
.....who advises us that.....was in
your employ for a period of.....

We would greatly appreciate any information that you can give us regarding this individual's record, assuring you that we would be glad to co-operate with you in a similar way at any time. If you wish, it would be sufficient to return this letter with answers to the following questions:

Is the applicant's statement correct as to the period of employment by you? .....
Did you find this employee capable.....honest.....punctual.....
Why did he/she leave your employ? .....
Would you re-employ? .....
Remarks .....
.....
.....

Yours very truly,
SANGAMO ELECTRIC COMPANY
of Canada, Limited,
Vice-President.

Date..... Dept.....
Name.....Clock Card No. (attached).....
is leaving our employ at.....o'clock a.m. p.m. .....19.....
Please have wages due ready by that time.
Reason for leaving (state fully) .....
.....
.....
Amount of Pay $..... .....
Foreman's Signature

I acknowledge receipt of this amount in full payment of wages due.

.....
Employee's Signature

O.K. Genl. Manager Entered on Records.....Insurance Cancelled.....

Production of a Modern Newspaper

By J. S. MILLER, A.C.I.S.,
Gazette Printing Co., Ltd., Montreal.

(Before Montreal Chapter, February 5, 1931.)

THE newspaper of to-day is looked upon by every citizen as one of his daily necessities and we are to-day better informed of the day's events at home and abroad than ever before.

The birth of the newspaper might be traced to the Roman dynasty, for in ancient Rome, a pamphlet, Acta Diurna, "Daily Events" was published, giving official intelligence of battles, elections, games, fires, religious rites, etc. These were kept as public records and were also posted up in the public places of Rome and sometimes copies were dispatched to the provinces. In China, also is a paper, the Peking Gazette, which has appeared regularly since the days of the Tang dynasty, A. D. 618.

The newspaper in its modern acceptation can, however, only to be properly dated from the time when the invention of printing made a multiplication of copies a commercial possibility, and it would be hard to state definitely at what point and in what instance it can be said that a continuous service of news pamphlets commenced.

In all probability, the first newspaper appeared in the Netherlands, and it was not until 1622 that the History of English Newspapers began with the publication in London of the Weekly News. The evolution of the modern press in the various countries of the world can be continuously followed from that time.

In Canada, we are fortunate in having many successful newspapers that conform to the best traditions and standards of the world's fourth estate. Many of these newspapers have been serving the Canadian public for many years and an outstanding example is the Gazette of Montreal which has the unique distinction of being the oldest newspaper in Canada, with a continuous record of over 150 years publication.

The early papers were singularly devoid of news due to the condition of the times, which was long before the establishment of responsible government and the freedom of the press, and consisted mainly of essays, poems and dialogues.

News Gathering

The gathering of the news of a modern daily newspaper is incidentally an expensive and highly complex organism. It falls into two main classifications: the gathering of local, suburban, and district news, which is done directly by the staff of the newspaper, and the receipt of provincial, international, imperial and foreign intelligence through a variety of sources including special correspondents, official communications and news gathering agencies, which may be of either a co-operative or a proprietory character.

These two classes of news are again subject to division within the newspaper office, being either secured by, or handed over to

different departments. Thus happenings in Montreal and its vicinity may be of the general character, designated as local news or may come under the classifications of sport, financial and commercial, women's page, etc. The same applies to the news secured from outside sources, which may be telegraphic dispatches.

The largest department for collecting local news is that under control of the city editor, who has at his disposal a staff of reporters. Much of the day's news arises from pre-arranged events, and the city editor closely scans his own and other papers, and notes in a book, known as the assignment book, the dates and times of such events, and when the day arrives the reporter is assigned to cover the meeting, concert, lecture or whatever it may be. A considerable proportion of other news originates from, or is made known speedily to certain definite and routine sources, and reports familiar with these sources are assigned to visit or communicate with them. Thus one or more men are sent to the courts, another to the city hall, another to the board of trade, while others keep in close touch with the police, the firemen and the hospitals in order to get early word of crimes, accidents and fires. Still others call at the railway offices, the hotels, and other places of public resort, and interrogate officials, managers and employees likely to know of interesting or unusual happenings. A newspaper of repute also has many good friends who are willing to give the editor a tip as to existing or prospective news. Meanwhile the financial and the sports editors, and the members of their respective staffs, are following a similar procedue in the case of news connected with their special departments. Thus the collection of news is systematized, and little is overlooked.

The old idea that a reporter walked around at haphazard waiting for things to happen about which he can write, has little basis, for even when, as occassionally happens, assignments on the book are scarce, and a reporter is told to "scout around," his knowledge of previous or pending affairs and their possible development gives him a fairly clear idea as to where a "story" may be found.

A class of news material of which there is always a surplus is that sent in by individuals, firms, or organized bodies, generally with the purpose of promoting some personal or gainful object. A portion of this has news value, even if the object of the contributor is an ulterior one. To take an example, when a newspaper prints the details of a new Ford model, it is giving Henry Ford and his products valuable publicity free, but it is also giving matter of keen interest to every reader who owns a Ford or hopes to own one. Material of this kind has to be very closely scrutinized by the editor to separate what portion of it has news value or deserves to be printed in behalf of a worthwhile cause, and that which is nothing but advertising which should be paid for.

The telephone and telegraph are also used extensively within the city in the case of late news where too much time would be lost if the reporter returned to the office, or for running stories of sports events, political meetings and similar happenings. Thus, hockey match reports are telegraphed from the Forum to The Gazette for its early edition, as was also the big rally held in Maisonneuve in the Dominion election. Long distance telephone wires are also utilized liberally in obtaining the news within a radius of fifty miles of Montreal.

A recent development in news gathering is the use of the radio. Some of the important pronouncements made by the party leaders and their candidates last July being taken verbatim from the radio broadcasts in newspaper offices hundreds or thousands of miles from the scene and prepared for the press well ahead of the time when they could have been received by telegraph.

The Canadian Press

For the news of the rest of Canada and the outside world, The Gazette, like all Canadian dailies, relies largely upon the Canadian Press, a co-operative, non-profit-making organization created and maintained by the newspapers themselves for the interchange of their most valuable commodity, which is news. The Canadian Press might be described as a news clearing-house, performing much the same functions as the institution organized by the banks to assort and allot to each its various dues and obligations. Each paper places its local and district news at the disposal of The Canadian Press, and receives in return the news of other cities and districts similarly supplied by its contemporaries all across the Dominion. This volume of Canadian news is collected and re-distributed by The Canadian Press through its bureaus, strategically located from Halifax to Vancouver and linked up by leased wires which run also into each newspaper office. This process involves, of course, considerable selection, condensation and rejection, for as a rule the value of news decreases with its remoteness from the point of origin, and a happening in Montreal, which is worth reporting to the extent of two columns or so in our local newspapers, may be worth only half-a-column to the reader of a Toronto paper, and but a "stick," or about twenty lines, in Calgary or St. John. In addition to thus covering all Canada for its newspapers, The Canadian Press also has the exclusive right to receive and deliver to its members the news service of the Assosiated Press, a pioneer co-operative news-gathering organization upon which The Canadian Press was largely modelled. As the Associated Press covers not only the United States but the whole world, either through its own representatives or through affiliations with other agencies, or with important journals in all the principal countries, the smaller Canadian dailies are assured of a splendid and comprehensive Dominion and world-wide news service through their Canadian Press membership.

Special Despatches

In order, however, to give their readers the fullest possible value, metropolitan papers of the calibre of The Gazette supplement their Canadian Press service in several ways. One is by the maintaining of staff correspondents in other cities which are important news centres, such as Ottawa, Quebec and Toronto, while on occasion special despatches may be ordered from still other cities, or members of the Montreal staff may be sent to cover certain events, when it is desired to give longer and more detailed reports than The Canadian Press would be justified in carrying, having in mind the interests of its total membership.

News Syndicates

Another practice of the larger newspapers is to amplify their news facilities by forming connections with one or more of the vari-

ous successful news syndicates operated either by private or by individual newspapers or groups of newspapers. The usual procedure is for the syndicate to notify the subscribing paper what news is available, in the form of a schedule giving a brief resume of each article or item, with the approximate number of words. From this schedule the telegraph editor of the newspaper sends his orders, in accordance with the news value of the respective items and the space he has available, and the material is then telegraphed to the newspaper either by commercial or leased wire. Thus, The Gazette has the exclusive right in Montreal and the surrounding territory to all the news of the New York Times, from which a selection is made by The Gazette's own filing editor in the Times Office, connected with the desk of the telegraph editor of The Gazette by leased wire.

Mechanical Operations

Having gathered the news, let us now go to the composing room and view the first mechanical step of the production of the newspaper. And here let me emphasize one point. The production of the Modern Newspaper is a constant race against time and as the size of the paper—that is the number of pages—tends to increase, so the struggle against the clock is intensified.

The mechanical equipment of the modern composing room consists of Linotype or Intertype machines and Ludlows.

Before the invention of the Mergenthaler Linotype machine, which was in 1889, the type was set by hand, that is the compositors had to stand at the cases which contained the type and pick out the letters by hand which you can readily understand was a very slow process, and this type after use had to be re-distributed into the cases for the next day's paper. With the advent of the Linotype Machine, the work in the composing room was completely revolutionized. The operation of the machine is very similar to that of a typewriter.

Each Linotype machine is equipped with a magazine containing a font of matrices which consist of all the letters of the alphabet, all numbers and necessary punctuation marks. Certain letters of the alphabet are in use much more than others and the font of type contains mere matrices of these particular letters than of the letters which are not so much in use. The operator of the Linotype machine has his copy in front of him and on the depression of the key, the required matrix falls out of the magazine and takes its alloted place in the line of type which is to be cast. In between each word is a space band which is formed exactly like a wedge and when the line is ready for casting the space bands are forced up, wedging the matrices tightly together. By depressing a level the operator brings the line of matrices against the throat of a metal pot containing molten lead and forces a supply of this lead against the face of the matrix. The lead immediately solidifies to form a line of type in a solid piece. The matrices are then automatically caught up by a lever and are placed on a distributing rod which distributes them into their allotted places in the magazine. This distribution is perhaps the most ingenious part of the Linotype machine. The matrix is V shaped at the top and the inside of this V is a series of notches. These notches provide 90 combinations, similar to that

of a yale key and when the matrices come to their combination on the rack they immediately drop into the magazine and are again ready for use.

The Linotype machines can only be used for certain classes of type, so that when we come to advertisements or heading where the larger display type is used, we have to bring into use either the Ludlow machine or the old style foundry type. The Ludlow machine is in some respects similar to the old style hand composition. The fonts of type are held in cabinets containing several trays which hold various sizes and styles of matrices. The operator goes to the drawer of matrices which he requires and sets up his words in a stick especially adapted for this purpose. This is inserted in the Ludlow machine which automatically casts a slug, giving a reproduction of this type. The matrices which he used to get this cast are immediately returned to the cabinets and are ready for use.

The "Make-up"

Having set the type, it is then put into galley form and proof pulled which is read by the proof readers and if necessary, corrections are made. The type is then taken to the make-up table and put into page form. The making up of the page is one of the most important jobs on a newspaper and only the most efficient men are detailed for this work. Advertisers desire and pay for certain positions in a newspaper—for instance, Morgans want the last page of the Gazette and Eaton's the Women's page—and it is the duty of the make-up man to see that the advertiser's desires are complied with. He is told ahead of time how large the edition will be—a 26—30 or 48 page paper or whatever it may be and he can lay his plans accordingly. He makes a dummy of each page, laying out the advertisements in skeleton form in the exact position they will occupy. He also has some idea of the space that will be taken up by feature news stories—A Maroon-Canadian Hockey game would call for two columns and other prominent games ½ to ¾ columns.

There is always available a considerable amount of reading matter already set up which can be used to fill up blank spaces, and when the time limit is reached the page is locked up tightly in a chase so that it will remain securely in position ready to go to the matrix roller. The type is absolutely flat and as the newspaper press prints from a circular cylinder, it is necessary to make a cylindrical casting. We first make a Stereo-Matrix. The matrix in use to-day is a dry matrix which is purchased ready for use and this is placed on top of the type and passed through the matrix-roller which exerts an extreme pressure. The result of this operation is that all the raised portions of the type are impressed upon the papier-mache which emerges as a perfect mould of the entire page. This is dried, packed and transferred to the plate casting machines where it is placed in a mould and molten lead is pumped in. The Stereotype casting machinery used by the larger newspapers is fully automatic and produces finished press-plates at the rate of 4 per minute. The smaller papers, however, use equipment which needs two operations. First, the casting of the plate in the mold and then a transfer of the plate to a trimming and finishing machine. Both equipments deliver a finished semi-cylindrical plate an exact reproduction of the type matter produced in the composing room.

PRODUCTION OF A MODERN NEWSPAPER

The Press

The press of 1778 was nothing more than a somewhat crude single action proof press operated by a lever, and it was necessary to ink the type by hand for each copy which would in all probability, not produce more than 100 copies an hour. To-day The Gazette is printed on a Hoe sextuple press which will print 60,000, twenty-four page papers per hour. A New York paper has recently installed a new press capable of delivering 125,000, forty-eight page papers per hour.

The modern newspaper press is equipped with a very intricate and efficient electrical control where full advantage has been taken of electrical energy. Control stations are placed at strategic points on the press and each control station gives the pressman absolute control of the machine. You can readily see that one man cannot supervise this large machine, so that control stations which give immediate control at any desired point are a necessity. Each control box has 7 push buttons.

First—We have the warning or "reset" button which lights a series of red lights around the press and also causes a similar series of white lights to flicker so long as pressure is maintained on the button. This warns the men working around the machine that the press is going to be put in motion.

Second—We have a safe button. This opens the circuit on the control station and is used by the pressman if he wants to prevent the press from being put in motion. This button also lights the red lamps but not the white one's and the signals are not confused with that of the warning button.

Third—We have "On" button which starts the press and intermittent pushes on this button accelerates it to the desired speed.

Fourth—We have the "Stop" button which brings the press to a dead stop. The press can be brought to a standstill in a fraction of a second from a running speed of 100 papers per second without jamming the machine or breaking the newspaper sheet which is a marvel of mechanical brake power.

Motive Power

A newspaper press weighs from 300 to 500 tons and the motive power is supplied by two motors of 10 and 100 H.P. The first impulse is supplied by the small motor which runs through a ratio of intermediate gears and carries the press up to a certain momentum where the large motor picks up the load and the small one is automatically cut out and stops; in a way it can be compared to the gear shift of an automobile only on a press it is fully automatic.

The inking device is controlled by one main pump which supplies the ink to the ink fountains on the press. Each fountain again has 32 small pumps, corresponding in number to the 32 columns of type matter that is to be printed on each cylinder. The pressman has by this means accurate and immediate control of the ink supplied to all portions of the paper.

When the ink comes from the pumps it is taken up by the fountain roller. The intermediate roller then transfers it to the large ink cylinder where it is thoroughly smoothed and mixed by the distributing rollers. The large form rollers then take the ink and transfer it to the plates.

The Paper

The paper is fed into the press from rolls, which are placed underneath the printing cylinders. These rolls weigh about ½ ton and contain approximately 4 miles of news print. The semi-cylindrical stereo-type plates which we have seen cast are placed on the type cylinders, 4 in a row, each cylinder taking 8 plates. The type cylinders come in contact with the inking rollers and the paper passing between the type cylinder and the impression cylinder receives the ink image and the paper is carried along to the folding mechanism where all the sheets that go to make up the paper are collected and folded in their proper sequence and cut. The folded paper is then delivered to a conveyer and by means of an ingenious device each 50th paper is kicked out of alignment and removes the necessity of counting the papers at the receiving end.

The conveyor is an endless belt of series of belts and carries the papers from the folder to the distributing or mailing room. Here the delivery of the paper is controlled. Sales are made direct to the news-boys for sale on the street. Distribution is made to city points where contact is made with the carriers who deliver directly to the homes. Parcels are made up and sent by express to agents in other cities, towns and villages. Mail subscribers have their papers individually addressed and these papers are placed in mail bags and sorted for post-office distribution, so you can see that even after the paper is printed there is a great amount of work to be done and this has to be done both carefully and speedily for time is a great factor in newspaper service.

DISTRIBUTION OF NEWSPAPER COSTS

REVENUE

Advertising.
Daily Subscriptions.

EXPENSES

Material

Paper.
Ink.

Editorial Wages

Editorial.
Financial and Commercial.
Telegraph News.
Sporting.
City Editors.
Proof Reading.

News Service

Telegraph C.P.R.
Telegraph C.N.R.
Telegraph N.A.
Canadian Press.
New York Times.
New York Leased Wire.
Correspondents.
Special Features.
Reporting Miscellaneous Expenses.
London Office.
Ottawa Office.
Toronto Office.
Quebec Office.

Composing Room

Wages.
Metal.
Electric Power for Heating Metal Pots.
Coal.
Gas.
Miscellaneous Expenses.

Press Room

Wages.
Roller Composition.
Expense.

Mail Room

Wages—Room.
Wages—Paper Carriers.
Paper.
Twine and Paste.
Lakeshore Delivery.
Country Delivery.
Miscellaneous Delivery.
Express on Papers.
Postage on Papers.
Miscellaneous Expenses.

Circulation Department

Wages.
Commission on Subscriptions.
Addressing Machine Expenses.
Miscellaneous.

Advertising Department

Wages.
Advertising Commissions—London.
Advertising Commissions—New York.
Discounts.
Bad Debts.
Advertising "The Gazette".
Telegraph Tolls.
Miscellaneous.

General Operating Expenses

Telephone.
Telephone L.D.
Car Tickets.
Job Printing.
Power.
Lighting.
Paper.
Repairs.
Stationery.
Miscellaneous.

Overhead Expenses

Management and General Office Wages.
General Expenses.
Cartage.
Donations.
Pensions and Sick Benefits.

Fixed Expenses

Rent and Taxes.
Insurance.
Depreciation.

NEW BOOKS

A SOLUTION to the Appreciation Problem. By Wm. B. Castenholz, A.M., C.P.A. Published by LaSalle Extension University, Chicago. In this little volume of 95 pages Mr. Castenholz, who is director of the Department of Higher Accountancy of LaSalle Extension University, and senior partner in the firm of Castenholz & Dittmar, Certified Public Accountants, Chicago, puts forward a new accounting treatment of appreciation. First expressing his agreement with the view expressed by many accountants, that fixed assets used in operations are really deferred charges to future operations, he makes this point a basis for his accounting plan.

Mr. Castenholz suggests an annual valuation of the fixed assets. This valuation he would show in the balance sheet merely as a foot-note, so that the shareholder or creditor could thereby compare the original cost and the depreciation with the present monetary value shown by the foot-note.

For profit and loss statements, however, he would use the revised annual figure, so that the valuation of the fixed-asset service units consumed in the year would be up to date. He further suggests that this depreciation on fixed asset values, or deferred credits, immediately become prepaid expenses at the beginning of the year, and that the prepaid expense account then be credited, say monthly, with the machinery service units actually employed in production.

By his plan he would avoid any danger of appreciated value being capitalized. They would be realized only as they are earned from year to year. He works the plan out in some detail, and also applies it to land values and to public utilities.

The book concludes with a further article on "This Thing Called Depreciation."

Stock Control Records

By J. S. LUCKETT,
President, Luckett Loose Leaf, Ltd.

(From Canadian Office)

FIRST, stock control methods need not change the system that any firm is using, but it merely adapts it to an up-to-date quick method of reference. This method of quick reference is what is known as the Visible Plan of filing.

It has been thoroughly demonstrated that records filed visibly in Loose Leaf form are used, where records that were kept "blind" are so much trouble to look at, frequently the clerk guesses at the information instead of looking it up. When the forms are in a Visible Binder, it is so simple and easy to look at them, instead of trying to remember these points, the clerk looks at his sheet instead of guessing.

It has also been definitely proven in many cases that Stock Records that are kept in the Visible Record, are up-to-date, where formerly these business firms, who attempted to keep Stock Records under an old plan of filing, found that their records were not kept up to date, and therefore, of very little value.

Therefore, we come to the second step; namely: that records kept visibly are kept up to date, while those kept in the "blind" form are very frequently not kept up to date because of the time required for making entries. These two points, we claim, are the most vital ones in any record. First, the ease and rapidity in which the record can be kept, and second, the simplicity of the record which insures its being kept up to date all the time. Visible Records do these things, and these two points alone are sufficient to justify the existence of a Visible Record plan.

The form itself can be anything that the particular business may require. What is suitable for one concern, would be entirely unsuited for another. Therefore, while some forms are on the market and are highly satisfactory in many cases, there are many other firms who will find it necessary to have a form designed for their own particular purpose. All that is necessary is to put on the form the information that you particularly want to get. Then arrange it in a Visible plan; have it produced by a manufacturer who knows the fine points in Visible Record work, and success is assured.

The principle of one plan is to devote one sheet to every item in the stock. At first plance this may seem a laborious method, but when you examine the sheet itself and see the tremendous amount of information that it will give you over a period of years, then the slight additional work will be more than made up by the information gained by its use. This form gives you the actual monthly sales, the total sales for the year and the average monthly sales. In this connection it shows you those months in which that particular item is active or slow and your own investigations can determine whether this is a normal condition or an abnormal one for that particular item.

This form shows you the actual stock on hand at the first of each month, or at a certain date in each month, and this carried out will give you the average monthly stock and in turn the average monthly turnover on each item.

The average turnover on each item is arrived at by dividing the total sales for the year by the average stock carried each month. To arrive at this, add up the columns showing the stock on hand at the first of each month, divide by twelve, which will give you the average stock carried and then, as mentioned above, divide the total sales for the year by the average stock carried, and the result will be the rate of turnover.

The form also shows you at each inventory period the amount of goods ordered but not received, the amount of goods picked up from local sources during the month, and the amount ordered each month. The pick-up column is a very valuable one, as it will show you whether or not you are ordering far enough in advance, and whether you are carrying sufficient stock on hand.

Going back over this form, after it has been in use for six or eight months, you will begin to see the value of a definite record of the sales per month, as it will enable you to buy according to sales and in that way keep your stock at a minimum that will take care of your business, yet up to a maximum where you will not lose sales. After the form has been in use for two or three years, it will be of the greatest value as the information gradually accumulates and becomes more valuable as the form is longer in use.

The reverse side of this form gives additional room for sources of supplies and adequate room for costs. In this connection, it is recommended that after the costs have been established, that these need not be entered each time goods are bought, unless the costs vary. If the cost on the next lot is the same as the first, it can be checked on the invoice, and passed along without making an entry. You get the record of your purchases from the first side of your sheet, so that it is not necessary to make these entries of invoices, unless you desire to do so.

The column for sale price is a most valuable one, as it enables you to have several records of prices by quantities, or by retail, wholesale and jobbing, or in any way that you want to divide it.

In this case, figures should never be erased, but any change in selling prices should be entered on the next line, which gives you a consecutive record of price changes over a period of years.

It might be claimed that it takes a great deal of work to keep this record in an up-to-date form, but this is not the case.

There are two plans for working this, both of which have their merits. One is to take a complete inventory of the stock by putting all of the clerks, salesmen, etc., on the job on the first working day of each month, working one or two nights if necessary, in order to get the records complete. This plan has the advantage of cleaning up the job in one day, and leaving the rest of the month entirely for selling and filling orders.

The other plan is what may be termed a 20-day plan, i.e., divide the stock into twenty divisions, and have the stock clerk take an actual inventory of one part each working day of the month, leaving out Saturdays and Sundays.

This plan has the advantage of spreading the work evenly over the month, without any undue pressure on any individual and with the record coming into the office regularly every day. The records can be kept in that way in orderly condition; one section of the buying can be done each day; the goods are received regularly through the month, and the invoices are payable throughout the month, so that this method has its advantages.

Either case, with variations to suit conditions, can be worked out, depending upon the individual conditions of the firm where the plan is to be installed. It is surprising how easily this 20-day plan can be worked out, after it has been originally put into operation.

One large retailer, having an initial stock of some 6,500 items, adopted this form, and in three years time has reduced his number of items in stock by about 25%, has increased his sales by a very considerable amount without increasing his investment in stock. In other words, it enabled him to do a very considerable greater volume of business at the same investment with a very considerable less number of items to handle, and he tells us that his profits increased very materially during that period. He atributes it largely to the fact that he consistently kept his Stock Control plan up to date.

He finds, and others do the same thing, that it is not a laborious plan to keep this form up. It is done without extra help, except at the first of the year, when he takes on an extra girl with a computing machine to figure out his average sales, turnover, etc., for about two weeks' time.

In some institutions it is possible and practical to use a form designed for their particular purpose, keeping their inventory up to date at all times. This enables the clerk in the office to check off the Stock Record each order, as it is received, before it goes to the Stock Room. It enables the Stock Clerk to know at all times the exact condition of the stock, where a customer may be advised instantly how many of any item is in stock, and any other details that may be required by a customer or by the management.

Such records are of the greatest value, but are not practical where a great number of items are turning over rapidly in small quantities. However, wholesale houses, jobbers, and manufacturers can use this method in many cases to their decided advantage, and without a great deal of expense.

CHAPTER NOTES

HAMILTON

Reported by R. Dawson, Secretary-Treasurer.

Hamilton Chapter held its first social event on Thursday, July 16th, in the form of a golf tournament at the Waterdown Golf Club, followed by a dinner at the club house. The affair was a huge success and the members who attended are already asking when the

next event will take place. Quite a number of golfers and would be golfers took part and the following turned out to be prize-winners:

Low Net Score.....G. S. Brown
2nd Low Net Score.....W. Furneaux
2nd Low Gross Score.....J. Moffatt
3rd Low Net Score.....A. J. Mouncey
3rd Low Gross Score.....A. E. Keen
High Gross Score .....J. Farmer
Best Individual Performance.....F. A. Lee
Worst Language on the Course.....G. E. F. Smith
Best Dressed Golfer.....A. J. Ballantyne
Best Description of Game.....W. Furneaux, A. E. Keen, F. A. Lee

H. M. Ross, vice-chairman of the Chapter, acted as chairman of the dinner and called on G. E. F. Smith to distribute the prizes which he did in a very humorous manner and amid much merriment.

The event bids fair to increase interest in the Chapter activities and further social events are pending.

COST LITERATURE

Received in July.

PAINT Factory's Stock Control Plan Simple in Operation. A. S. Kayser. American Accountant, July, 1931.

Two Methods of Handling Organization Charges Contrasted. A. F. Stinson. American Accountant, July, 1931.

Chart Prognosticates Net Income Under Various Conditions. L. A. Carmen. American Accountant, July, 1931.

Wage Incentive Applications in the Western Electric Company. W. F. Hosford. National Association of Cost Accountants Bulletin, July 1, 1931.

Accounting Reports for Executive Control. W. H. Bell, C.P.A. Certified Public Accountant, July, 1931.

How to Read a Balance-Sheet. R. H. Cumming, C.A., F.S.A.A., F.F.I.A. Indian Accountant, June, 1931.

What Executives Need from Accountants. J. C. Belden. National Association of Cost Accountants Bulletin, July 15, 1931.

Depreciation Based on Unit Cost. A. W. Moser. Journal of Accountancy, July, 1931.

Wage Payments by Results. P. H. Lightbody, F.C.W.A. Cost Accountant, July, 1931.

Office Machinery. J. R. Bentley, F.C.W.A. Cost Accountant, July, 1931.

Balance Sheets—Their Interpretation and Uses. S. M. Caldwell, A.C.A. Accountants' Journal, July, 1931.

Method of Figuring Unused Capacity. H. C. Hedenburg. National Association of Cost Accountants, July 1, 1931.